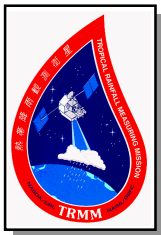


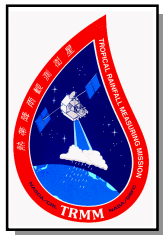
TRMM Monthly Status Briefing

July 5th, 2000



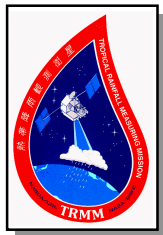
FOT Overview

- Operations Status - Engineering Staff
 - Flight Ops Summary - Lou Kurzmilller
 - Training, Electrical, & Thermal - Andy Calloway
 - ACS & FDS / C&DH - Mark Fioravanti
 - RCS & RF / Comm - Robert Bote
 - Power and Deployables - Justin Knavel
 - CERES & VIRS - Mark Fioravanti
 - LIS, TMI, & PR - Andy Calloway
 - Ground System - Andy Calloway
 - Upcoming Activities - Andy Calloway



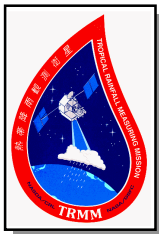
Flight Operations Summary

- Supported 530 SN events in June
 - 1 Yaw Maneuver
 - 7 Delta-V Maneuvers
- 6 Event, 2 Anomaly Rpts & 2 Generic Late Acq Rpts generated
 - ER #179: Neg Acq; Event Scheduled out of View
 - ER #180: MOC H/W; PTP-1
 - ER #181: Bad Weather at WSC
 - ER #182: WSC S/W Problem
 - ER #183 & #184: MOC MP S/W
 - AR #82: CERES DAP Microprocessor Failure
 - AR #83: Post Delta-V (#199) Discharge Current Spike



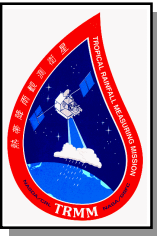
Flight Operations Summary

- Significant Mission Milestones
 - Completed Delta-V #200
 - Approaching orbit #15,000
- Staffing
 - Experienced console analyst onboard
 - Awaiting Bowie State summer intern for console analyst duties



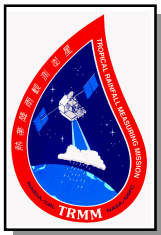
Training

- Now fully staffed with Console Personnel
 - Six analysts are now fully certified for CA and SA positions
 - The two most recent personnel are completing their CA certifications
- The two new engineers are studying TRMM spacecraft & operations for SA certification and more detailed subsystem knowledge for Subsystem Lead responsibilities
 - Also cross-training for CA certification



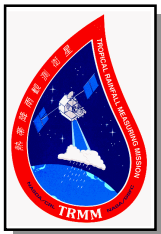
Thermal / Electrical Subsystems

- Thermal subsystem remains nominal
 - Monthly data delivered to AETD with no comments or concerns to report
- Electrical subsystem nominal



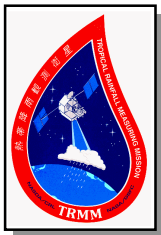
ACS Subsystem

- Writing to EEPROM
 - EEPROM Commits
 - » Correction for Magnetic Field Epoch (CCR #005) still open
- ACS Flight Software bug (CCR #053) - low priority at CCB
- FDF analyzing whether MOI needs to be updated (WR #007)
- ESA counts becoming higher in Q3 when -X forward (Q3 points along velocity vector so seeing 'ram air' effects combined with solar max.)
 - Will continue to monitor closely
- Annual S/C Mass Update to be performed next week.



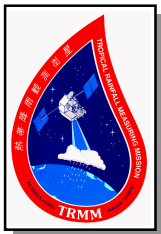
C&DH Subsystem

- UTCF adjustment was not required this month
 - Current UTCF value remains 31535996.843867 sec
- Open Issues
 - Writing from RAM to EEPROM (CCR #034)
 - » New TSM table #21 and RTSs # 2, 3, 13, 14, and 15
 - » Plans on Hold, pending the status of CERES
 - New on-board DS filter table to record ACE data (CCR #048)
 - No-clock software patch FSW activities moved to #1 priority at CCB (CCR #047)



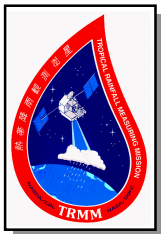
RCS Subsystem

- RCS performed 7 successful Delta-V maneuvers (#199 - #205)
- EOL worst case is **September, 2003**
 - Current fuel remaining is 563.017 kg
- No Open RCS Anomaly or Event Reports
- Upcoming Events
 - None



RF Subsystem

- 06/18 - Degraded Signal (ER# 181)
 - Adverse weather @ WSC (data recovered)
- 2 Generic Late Acquisitions (#60 & #61)
- Frequency offset Transponder #1 = **718.405** Hz (average)
- Frequency offset Transponder #2 = **-856.249** Hz (average)
- No open RF Anomaly or Event Reports
- Upcoming Events
 - Offset of transponder frequencies likely before end of year



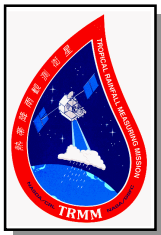
Power Subsystem

- PSIB auto-SPRU operations
 - Auto-SPRU was re-enabled from 00-172 to 00-175 (near Beta 58°)
 - Currently, Auto-SPRU is disabled
 - Monitor system with Code 563 close to Beta $\pm 58^\circ$
- Re-enabled TSMs 31 & 32
 - 00-158 TSMs 31 & 32 were re-enabled when the State of Charge counters reached 100% at the end of day
 - These TSMs are designed to safeguard against PSIB misconfigurations, and are not used for normal power maintenance operations



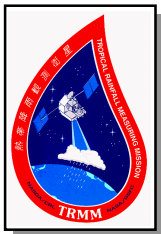
Deployables Subsystem

- -Y solar array drive temperature and behavior continues to be closely monitored
- Solar array drives and HGA continue to operate nominally
- No open issues other than to concentrate on array behavior and contingency training with all new FOT members



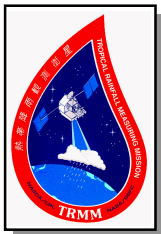
CERES Instrument

- DAP Telemetry Drop Out (Data Acquisition Processor) and Possible Failure (Anomaly #81)
 - 00-166: Radiance Counters Dropped to Zero counts, as did the DAA Voltages and have remained there.
 - 00-168: Reset both the DAP and ICP (Instrument Control Processor)
 - Uplinked DAP ADC loads, to attempt to characterize the possible failure on 00-175 and 00-178.
 - Uplinked new SubMUX Table to Dwell on different points in memory, and will continue uplinking new SubMUX tables in the next couple of weeks.
 - Later this week may attempt recovery with power cycling.
 - There are signs that the DAP is partially functioning. As we moved away from maximum beta angle, before and during sun rise most of the temperature telemetry would return to normal limits and remain for a short period.



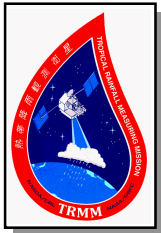
CERES Instrument

- Open Issues
 - DAP Telemetry Drop Out (Anomaly #81)
 - Bridge Balance Resets were still occurring frequently (Anomaly #80)
 - Azimuth rotation stalls (Anomaly #79)
- Issues on Hiatus
 - Continuous Biaxial operations
 - DR on MP ground system to incorporate new CERES requirements



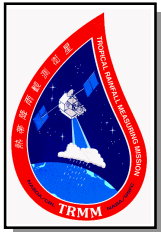
VIRS Instrument

- 2 Solar Calibrations were performed on 00-184
- Blackbody temperature still being maintained between 9 °C and 15 °C
 - Lowered Upper Temperature Limit when the Beta Angle is above 45°. Since the Power Supply temperatures increase several degrees when both heaters are ON



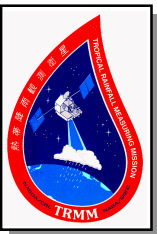
LIS Instrument

- Routine MSFC real-time command request performed on 00-173 (CR #384)
- No open issues



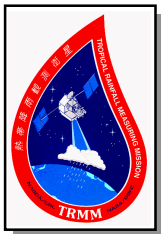
TMI / PR Instruments

- No concerns or open issues for TMI
- PR Activities:
 - Four External Calibrations conducted (Bin Angles 72, 70, 54, 30)
 - One LNA Analysis conducted
- PR Open Issues
 - Frequency Agreement Renewal activities continue
 - » No reports from the EOC of new interference to PR in June



Ground System

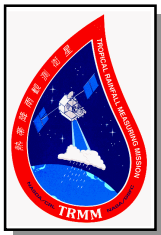
- MOC is fully reconfigured for redundancy between UPS-2 and UPS-5
 - Still awaiting final updated MOC configurations drawings
- FOT is now regularly attending B32-UWG meetings
- TSMs working with FOT to resolve Security Scan vulnerabilities
 - Patch which affects MP was removed from String-2 by TSM
 - Global directory and file privilege update to be implemented on String-2 1st
- Ground System Event Report Summary
 - #179: Neg Acq; Event Scheduled out of View: FOT-developed MP Assistant module now approved for use (RCCA #28)
 - #180: PTP-1 alarmed during lightning storm: Replaced on 07/03 as a precaution - replacement having problems - still using PTP-3
 - #183: Oracle 'Listener' process did not automatically start upon reboot - reason is unknown but list of required processes was created for reference
 - #184: GSOC did not properly start upon reboot - script fixed by developer



Upcoming Activities

- 0-2 Months

- Ensure FOT training remains top priority following recent attrition
- Ensure PTP-1 replacement is fully functional and commence using it again
- Copy remaining RAM SCP changes to EEPROM
- Dump BPROM and EEPROM memory and update GRIs if necessary
- System Software Release 8.1 implementation
- Possibly conduct some preliminary testing with TDRS-H
- GITT Security Scan vulnerability closures
- Complete 1st draft of TRMM End of Life and Controlled Reentry Plan
- Complete Final version of TRMM Continuous Risk Management Plan
- Continue to close open CCRs, MOCRs, ERs, ARs, and MSR Action Items



Upcoming Activities

- 2-3 Months
 - Emergency EPO Switch location transfers (currently on hold)
 - Commence monthly FOT CRM meetings to mitigate identified risks
- 3-12 Months
 - Test, validate, and eventually accept new PACOR-A system
 - Commence DSN/GN FOT training
 - Testing of new PTP hardware and software deliveries
 - System Software Release 8.2 Delivery
 - Transponder Offset Activities